

# Fast Optical DO Sensor for Microscale Measurements

## RINKO-EC ARO-EC-CM

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### Overview

The RINKO-EC is optimally designed for eddy correlation measurements by combining a miniaturized detection tip with RINKO's hallmark high-speed response (90% response in 0.5 seconds) DO membrane. The main body is made of titanium, providing robustness despite its compact size. The DO detection membrane allows for continuous measurement for up to 200 hours and can be replaced and calibrated by the user, ensuring excellent maintainability.

The connector in the photo is manufactured by Impulse (current models are manufactured by SubConn).

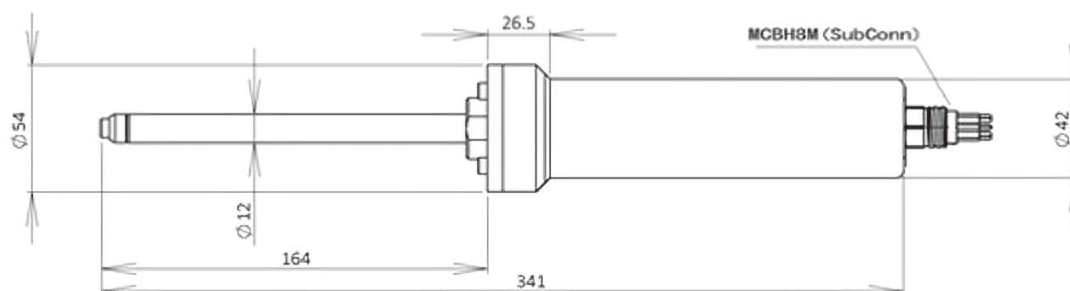
### Specifications

Name	RINKO-EC	
Model	ARO-EC-CM	
Parameter / Sensor Type	DO	Optical
	Temperature	Thermistor
Range	DO	0 to 200%
	Temperature	-3 to 45°C
Accuracy / Repeatability	DO Repeatability	±0.5% FS <sup>*1</sup>
	Temperature Accuracy	±0.02°C (3 to 31°C)
90% Response Time (Physical Quantity Conversion) (Air to Water at 25°C)	DO	≤0.5 sec
	Temperature	≤0.5 sec
DO Membrane Lifetime	200 hours (continuous use)	
External Output	Analog Voltage (0 to 5 V)	
Preheat Time	5 sec	
Power Supply	DC 12 to 24 V	
Current Consumption (when supplied with DC 12 V)	≤20 mA	
Material	Titanium Grade 2	
Dimensions	φ54 mm × 341 mm (excluding connector)	
Weight	Approx. 0.6 kg in air / Approx. 0.3 kg in water	
Pressure Resistance	Equivalent to 50 m depth	
Connector Specification <sup>*2</sup>	MCBH8M (SubConn)	

<sup>\*1</sup> For more accurate DO values, it is recommended to perform two-point calibration (zero and span) before measurement.

<sup>\*2</sup> Please prepare the connection cable (signal cable) yourself.

### Drawing



### Pin configuration

MCBH8MTI



- 1: Analog OUT 2 + (Temperature, 0 to 5 V)
- 2: (not used)
- 3: (not used)
- 4: Analog OUT 2 - (Temperature, 0 to 5 V)
- 5: Analog OUT 1 - (DO, 0 to 5 V)
- 6: Analog OUT 1 + (DO, 0 to 5 V)
- 7: GND
- 8: POW+ (10 to 24 VDC, 12 VDC recommended)